

GOALS AND STATUS REPORT FOR MINERAL SECTOR FOR 12TH PLAN

1.ELEVENTH PLAN OBJECTIVES *

The following were the main objectives of the Eleventh Five Year Plan in the mining sector:

- Intensification of exploration for low-volume high value minerals such as gold, diamond, base metals, and platinum group of minerals and efforts towards augmentation of the existing resources in respect of ferrous and non-ferrous minerals and industrial minerals.
- Improvement of the National Mineral Inventory, particularly for those minerals in which reserves are low such as base metals, nickel, tin, graphite, noble metals, precious stones, and rock phosphate.
- Restructuring and modernization of the GSI in the areas of instrumentation for both ground and airborne surveys, and acquisition of state-of-the-art laboratory facilities with high-precision capabilities. Establishment of a comprehensive portal giving meta-data in respect of regional exploration work done by GSI and the scope for investment based on such work.
- Modernization of the IBM and the State directorates for establishment of a national registry (Cadastre) and a mineral atlas. The database would comprise both physical and resource inventory and include a Tenement Registry with details of green field areas, brown field areas, and relinquished areas including areas identified by the GSI as not worth pursuing. The data would be maintained online giving instant information to prospective investors on what is available for reconnaissance, prospecting, and mining.
- Acceleration of the process of adoption of United Nations Framework Classification (UNFC) system of classification of mineral resources so as to present reserves/resources of minerals on an internationally uniform system and help in attracting more private investment into the sector.
- Development of minerals in the NER with the States of this region playing a major role and the Central Government agencies facilitating their initiatives with specific interventions.
- Strengthening R&D activities in all aspects of mining.

2.REVIEW OF THE XI PLAN AND STATUS REPORT:-

2.1 The National Mineral Policy, 2008 was approved by the government and adopted in March 2008.

2.2 Some Important Features of the National Mineral Policy, 2008 * –

- Seamless and transparent grant of mineral concessions and security of tenure to a holder of a concessionaire.
- Arm's length distances between state agencies that mine and those that regulate.
- Preference to value addition industry in grant of mineral concession.
- Development of a proper inventory of resources and reserves—priority to a mining tenement registry and a mineral atlas.
- Strengthening of the Geological Survey of India, the Indian Bureau of Mines, and the State Directorates of Mining and Geology, with manpower, equipment, and skill sets upgraded to state-of-the-art.
- Developing a framework of sustainable development to take care of biodiversity issues.
- Special care to protect the interest of host and indigenous (tribal) populations through developing models of stakeholder interest based on international best practice.
- Assistance to state governments to overcome the problem of illegal mining through operational and financial linkages with the Indian Bureau of Mines.
- Developing a comprehensive institutional framework for R&D and training.
- Developing of capital market structures to attract risk investment into survey and prospecting.

2.3. The government has initiated a proposal for amendments/revision of the Mines and Minerals (Development and Regulation) Act based on the recommendations made by the High Level Committee (HLC) and the National Mineral Policy.

New Mines & Mineral (Development & Regulation) Act would replace the existing Mines & Mineral (Development & Regulation) Act 1957. The new Act has been prepared after wider consultations with the stakeholders. After obtaining the views of all the stakeholders, the draft Mines and Minerals (Development and Regulation) Bill, 2010, duly vetted by the Ministry of Law and Justice has been referred to a Group of Ministers headed by Shri Pranab Mukherjee, Finance Minister. The Group of Ministers has held four rounds of discussions on 22nd July 2010, 30th July 2010 and 17th September 2010 on the draft Bill. The draft legislation is at present at final stages of consideration by the GoM and it is likely to be introduced in the Parliament after approval by the Cabinet.

2.4 The Ministry had constituted a High Powered Committee (HPC) to suggest measures to strengthen the Geological Survey of India (GSI). The HPC has submitted its report on 31.3.2009 with a number of recommendations including

on issues of training and capacity building. The recommendations are being implemented in a phased manner.

HPC has envisioned to make GSI a world class Survey Organization. To achieve these, HPC has proposed right sizing of the GSI apart from providing technological inputs. An Implementation Committee has been set up to go into the details for implementation and for further follow up of its recommendations. Out of 74 major recommendations made by the Committee, action has been completed on most of the recommendations and rest are at various stages of implementations.

2.5 A committee has been constituted in the Ministry of Mines under the Chairmanship of Joint Secretary (M&R) for review and restructuring of the functions and role of IBM in terms of the Policy directions given in the National Mineral Policy, 2008. The Committee has prepared a draft report which has been put up on the website of the Ministry for inviting comments of the stakeholders. The IBM restructuring report after series of consultations with stakeholders is being finalized shortly. After this the desired modernization work for the National Regulator in pursuance of the recommendations of the Committee report will be taken up. Meanwhile, the Ministry of Mines has been able to persuade the Government to allow the IBM to revive 86 scientific and technical posts, which had been abolished earlier. Separately, the Ministry has also been able to ensure filling up of posts in Statistical Division of IBM after special intervention.

2.6 In order to augment the revenue of mineral producing states, the Hoda Committee had recommended that the method of fixing of royalty should move decisively to *ad valorem* rates. Internationally, the *ad valorem* royalty system is more commonly used as it has the basic advantage of providing buoyancy to revenues in line with increases in the price of minerals.

Based on the recommendations of the study group set up by the Ministry of Mines to consider the revision of rates of royalty and dead rent of major minerals (excluding coal, lignite, and sand for stowing), the government approved the royalty rates and dead rent and the same were notified by the Ministry of Mines in August 2009. These changes have resulted in substantial increases in royalties to the states, doubling and tripling the revenues in some States.

2.7 Keeping in view the increase in royalty revenues to the State Governments due to revision of royalty rates in August 2009, in a recent meeting of CEC the State Governments have been requested to prepare Action Plan documents for strengthening of the State Directorate of Mining and Geology. The Action Plans are being reviewed by the Ministry regularly.

2.8 The NMP lays down that a national inventory of mineral resources will be based on a comprehensive and up to date review of exploration data, and in coordination with Geological Survey of India, the Indian Bureau of Mines will maintain a database in digitized form comprising both a Resource Inventory and a Tenement Registry in accordance with the latest version of the UNFC system. The Tenement Registry will also give information of both Leasehold Areas as well as Freehold Areas in terms of green field, brown field and relinquished areas including areas given up by the GSI and other reconnaissance permit /prospecting licence holders. It is envisaged in the Policy that the data would be maintained online giving instant information to prospective investors on what is available for reconnaissance, prospecting and mining. Summaries of work done by public agencies will be kept in the form of meta-data in the public domain and detailed reports will be made available to interested investors on cost recovery basis.

In order to introduce such a system, the Ministry of Mines has started work on a Mining Tenement System, in consultation with the concerned Ministries/ Departments of the Central Government and State Government. A pilot project for Durg and Bellary District has been completed and based upon which MTS registry component is being developed by the IBM. The DPR preparation for the project is started by appointment of a Consultant.

2.9 Under the Offshore Areas Mineral (Development & Regulation) Act 2002, Offshore Areas Mineral Concession Rules 2006 have been notified and Controller General, Indian Bureau of Mines has been declared Administering Authority to perform various functions under the Offshore Areas Mineral (Development & Regulation) Act 2002. The areas available for grant of Exploration Licence have been notified by the Administering Authority i.e. IBM and grant letter for allotment of Exploration Licence in 62 blocks have been issued.

2.10 The Hoda Committee, set up to review the National Mineral Policy, held that some of the challenges facing the Indian Mining sector to develop in a sustainable manner would be to identify the appropriate use of land within a Land Planning framework through a democratic decision making process on the basis of integrated assessment of ecological environmental economical and social impact. The Committee also held that mining should contribute to economic, social and cultural well-being of indigenous host populations and local communities by creating stakeholder interest in mining operations for the Project affected Persons (PAP). The Committee recommended development of a Sustainable Development Framework specially tailored to Indian context.

In this context, the Ministry of Mines has initiated action to prepare a Sustainable Development Framework for the Indian Mining sector. The Sustainable Development Framework would address important issues pertaining to Rehabilitation & Resettlement, environment mine closure etc. The Ministry has selected a Consultant to prepare the draft Sustainable Development Framework through a bidding process. The Consultant has prepared and submitted a draft Sustainable Development Framework, consisting of principles, reporting initiatives and good practice guidelines for the Indian Mining sector. The draft document has been hosted on the website of the Ministry for obtaining the comments of the concerned public. The draft Sustainable Development Framework is likely to be finalized shortly.

2.11 Physical Performance

Specific production achievements of some important mineral-based industries are impressive as can be seen from following Table*

TABLE - 1
Physical Performance of Some Important Mineral-Based industries

S. No.	Item	Unit	2006-07	2007-08	2008-09	2009-10	2011-12 Projected
1	Crude Steel	Million tonne	50.82	53.86	57.65	65.51	80.25
2	Aluminium	'000 tonne	1,152.53	1,236.70	1,348.70	1524	1250.00
3	Copper cathode	'000 tonne	641.70	704.97	514	533	705.00
4	Zinc (Primary)	'000 tonne	380.94	458.23	579	614	638.00
5	Lead (Primary)	'000 tonne	44.55	58.25	60.32	64	95.00

* Mid Term Appraisal of Eleventh Five Year Plan 2007-2012- Planning Commission Report

Source: Joint Plant Committee, *Annual Report Ministry of Steel*, Ministry of Mines Working Group Report on Mineral Exploration and Development (other than coal and lignite), Volume III, for the Eleventh Five Year Plan. Note: E: Estimated.

@Excluding additional capacity of 250 thousand tonne from Vedanta Aluminum limited (VAL) at Jharsuguda, which is under trial run.

*April 2009- January 2010.

TABLE - 2
Production of Selected Minerals, 2006-07 to 2010-11

S. No.	Item	Unit	2006-07	2007-08	2008--09	2009-10	2010-11(E)
1	Iron Ore	Million tonne	187.70	213.24	213	218.63	212.61
2	Bauxite	'000 tonne	15,733	22462	15,460	13952	13363
3	Chromite	'000 tonne	5,296	4,873	4073	3413	3865
4	Manganese	'000 tonne	2,116	2,697	3620	2440	2901
5	Copper Ore	'000 tonne	3,271	3,245	3452	3227	

❖ Refer Tables 1&2 which indicates that crude steel production has been increasing and, with it, domestic production of iron ore. However, export realizations from iron ore exports have declined recently. The value of iron ore exports declined to US\$ 4.8 billion in 2008-09 as compared to US\$ 5.8 billion in 2007-08. In the first half of 2009-10, the value of exports of iron ore fell by a further 34 per cent.

❖ Refer Tables 1&2 which indicates that performance is mixed. Whereas production of iron ore and manganese has increased, production of other minerals has not. One reason may be, as in the case of chromites, that the imposition of export duty to discourage export of a scarce mineral to conserve it for value adding domestic use, can result in lower production of the raw ore. So long as the country's industry gains overall, this decline in one mineral or sector need not be of concern.

- 2.12 During XI Plan period Baseline Geoscience data collection on following attributes were taken up namely, special thematic mapping, geochemical mapping, geophysical mapping and aerial survey multisensory/aeromagnetic survey. Against the target of 35,000 sq.km set for XI Plan for special thematic mapping, a total of 28,009 sq.km was achieved upto March, 2011. Similarly, against target of 1,80,000 sq.km. for geochemical mapping, total of 87,691 sq.km. covered till March, 2011 and against the target of 84,000 sq.km. coverage upto March, 2011 is 82,934 sq.km. Against target of 77,500 sq.km. a total of 58,490 sq.km. has been achieved in aerial geophysical surveys. Apart from this, marine surveys were also carried out during XI Plan. A 30,201 line km. of bathymetric survey was carried out.
- 2.13 The IBM had taken up work in the Tenth Plan to present the National Mineral Inventory (NMI) in line with the UNFC system to improve the quality of information for assessing the economic viability of deposits. The IBM is updating the NMI as per the UNFC classifications and the updation of NMI as on 1.4.2010 is under process and already they have completed 22 minerals. NMI will be completed by March, 2012.
- 2.14 IBM has completed the preparation of the overlays of mineral and forest maps on 1:50,000 scales with respect to Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Orissa, , Rajasthan, Tamil nadu, and Uttrakhand. In the terminal year of 11th Plan 2011-12, Multi mineral maps with forest overlays in respect of Goa, Kerala, West Bengal, Haryana, Himachal Pradesh, Jammu & Kashmir and North Eastern States will be taken up and completed with forest overlays on a scale 1:50,000.
- 2.15 In 2009-10, 55 reconnaissance permits covering an area of 53,729 sq. km were granted, In 2010-11, 20 reconnaissance permits covering an area of 17,394 sq. km were granted, which indicates an encouraging response to the policy measures in the sector. The total number of reconnaissance permits granted by state governments as on 31 March 2011 was 372 out of which 253 were completed.
- 2.16 The FDI policies have been gradually liberalized in the last few years. With this, FDI in the mining sector for all non-atomic and non-fuel minerals, including diamond and precious stones, has now been fully opened. Since the liberalization of the FDI policy, FDI in the mining sector has been increasing. From a total cumulative investment of US\$ 506.59 million till March, 2008, it has increased to US\$ 797.84 million upto February, 2011.

3 OUTLAYS AND EXPENDITURE IN THE ELEVENTH FIVE YEAR PLAN

The approved Outlay for Eleventh Five Year Plan 2007-2012 is ₹8404.00 crore. This comprises ₹ 7221.05 crore of Internal Resources (IR), ₹2.95 crore of Extra Budgetary Resources (EBR) and ₹ 1180.00 crore of Gross Budgetary Support (GBS) with same Net Budgetary Support (NBS). The anticipated expenditure for Eleventh Five Year Plan would be ₹ 6838.79 crore comprising GBS of ₹ 927.08 crore. The year wise break-up of GBS approved and the expenditure for the Ministry of Mines is as follows.

(₹ in crore)

Year	Budgeted		Expenditure	
	Outlay	GBS	Outlay	GBS
2007-08	1380.29	160.00	1563.60	148.75
2008-09	2160.00	200.00	1627.37	166.24
2009-10	1647.82	200.00	947.76	158.80
2010-11	1763.17	210.00	1110.64	233.29
2011-12	1589.42	220.00	1589.42*	220.00*
TOTAL 2007-2012	8540.70	990.00	6838.79 *(Anticipated)	927.08 *(Anticipated)

4. AREAS OF CONCERN EMERGING DURING THE ELEVENTH PLAN

4.1 Investments in exploration are still grossly inadequate despite the geological potential and both in terms of the data generation by the national survey organization and in terms of the concession framework and access to capital for exploration, there are huge inadequacies which need to be addressed to provide the requisite investor confidence.

4.2 Exploration and mining regulatory system at Central level and even more so at State level are inadequate. Illegal mining and unscientific mining, are symptoms of a failure of the regulatory system in all its aspects, including proper exploration, scientific mining in accordance with Mining Plans, adoption of beneficiation practices, royalty accounting etc.

4.3 Though Section 23C of MMDR Act, 1957 empowers the State Govts. to frame rules to prevent illegal mining and the State Government may by notification in the official gazette, make such rules for preventing illegal mining, transportation and storage of mineral, illegal mining is still rampant. The major causes of illegal mining are –

- Poor detection and enforcement procedures – ineffective DGMs with poor information gathering and coordination capability, poor mobility and communication, poor investigation and prosecution mechanism, corruption, connivance and interference.
- Inefficient concession grant process including delays and inefficiencies in concession system, forest and other clearances
- Lack of awareness among those adversely affected including environmental consequence of unregulated mining, loss of State revenue, promotion of lawlessness

The causes of illegal mining need to be addressed.

4.4 Integration and coordination of sectoral policy is insufficient, resulting in suboptimal utilization of the run of the mine, ore reclamation. Policies on beneficiation, value addition and end use to ensure more efficient metal making and better management of demand and supply at ore stage for the purpose are lacking.

4.5 There is no mechanism to plan the creation and management of mining related infrastructure, including roads, rail and ports. Investments are not taking place and infrastructure costs are making operations less competitive.

4.6 The development of mining as a standalone industry (with linkages) and incentivizing and facilitating modernization of the mining industry, including mining equipment, use of mining software and provisioning of the requisite numbers of well trained mining engineers, geologists, geophysicists and geoinformaticists has not taken place.

4.7 Ensure increase in mineral resources and reserves, and prepare policies to meet raw material requirement.

- 4.8 Due to inadequate capacity particularly at State level, environmental and social issues associated with mining level activities have led to the perception that mining is a threat to local communities. Development of practices and systems including a sustainable development framework to reverse this perception is not taking place with the requisite speed.
- 4.9 There is very little investment in R&D on mining, exploration and mining technologies, beneficiation, development of new materials including alloys and high purity materials. Links between exploration efforts, mining activities and downstream activities (including recycling) are practically non-existent.
- 4.10 Policy formulation skills, particularly in this sector which involves a complex interplay of technical, technological, economic, geological and geopolitical factors are lacking. There is a need for a techno-economic policy making mechanism which suggests measures based on long term national interest and covers technology, R&D, raw materials, security, conservation and environmental protection.

* Mid Term Appraisal of Eleventh Five Year Plan 2007-2012- Planning Commission Report.

LONG TERM GOAL AND CURRENT STATUS FOR THE PURPOSE OF 12TH PLAN

S.N.	LONG-TERM GOALS	CURRENT STATUS
1.	<p>Increase Investment in Exploration</p> <ul style="list-style-type: none"> ➤ GSI to complete Geo-morphological and Lineament Mapping (GMM) by end of 11th Plan in 1:50K scale. ➤ GSI to complete National Geo-chemical Mapping (NGCM) for Obvious Geological Potential (OGP) area by end of 13th Plan. ➤ GSI to take up and complete Hyper Spectral Mapping (HSM) in OGP by end of 12th Plan in 1:50 k scale. ➤ GSI to take up a National Aeromagnetic Survey in the 12th Plan and complete it by end of 13th Plan (including an aircraft). ➤ GSI to put all spatial data sets on to its Portal to facilitate prospective investors. ➤ GSI to purchase Geo-technical Vessel (GTV) and Coastal Launch for offshore work. ➤ Concession framework to be made more investor friendly 	<p>Mapping programme is in progress as a national project of three years' duration with GSI and ISRO as a joint programme under National Natural Resource Management System (NNRMS).</p> <p>Mapping programme in progress. An area of 2,00,714 sq.km. which is 6.12% of country's total land area has been covered systematically under the NGCM. Spatial data to be uploaded to Portal.</p> <p>Pilot project taken up jointly by GSI and ISRO under NNRMS. Decision to be taken up to scale up.</p> <p>Concept proposal discussed in Standing Committee on Geology (SC-G), DPR to be prepared.</p> <p>Phase I & II complete. DPR for Phase III under preparation.</p> <p>Specification being worked out by GSI</p> <p>Draft legislation under consideration of GoM.</p>

	<p>through new Legislation by start of 12th Plan.</p> <ul style="list-style-type: none"> ➤ Venture capital flows to be facilitated by bringing concepts of 'Flow through shares, alternate platform for listing of early stage exploration co., allowing Indian exploration companies to issue GDRs without prior testing in India. ➤ High-risk exploration for deep-seated mineral deposits to be incentivized by enabling access to venture capital and putting in place regulatory, reporting and concession transfer systems for the purpose. ➤ Repositioning MECL in promotional role for concealed mineral deposit exploration. ➤ Adopt globally acceptable reporting system for assessing reserves and extractability of mineral deposits, and create conditions for growth of institutions to operate such systems for the benefit of the sector's growth, including accredited firms for quality assurance in reposting of exploration data. 	<p>Group formed to make recommendations.</p> <p>Group formed to make recommendations.</p> <p>MECON engaged as Consultant to prepare repositioning report.</p> <p>UNFC is being adopted for exploration as well as for reporting the reserves & resources. Institutional systems part of new MMDR Act.</p>
2.	<p>Improve Regulatory Systems</p> <ul style="list-style-type: none"> ➤ IBM to be developed as a Technical Regulator, to help develop a capacity at State level, inculcate scientific mining, mine closure and sustainable development practices. ➤ State Directorate of Mining and Geology to be developed to create capacity for the <ul style="list-style-type: none"> ❖ Concession system 	<p>IBM restructuring plan (Report of HPC likely in May, 2011) will detail out steps to develop it as a Technical Regulator to promote scientific mining, mine closure measures etc.</p> <p>Draft model State Mineral Policy circulated to State Governments and State Governments asked to formulate Action Plan for strengthening DGMS</p>

	<ul style="list-style-type: none"> ❖ Mine Plan and Closure ❖ Sustainable mining practices and stakeholder protection ❖ Royalty system <ul style="list-style-type: none"> ➤ Independent Regulatory and enforcement systems to be set up to help create a transparent, efficient and investor friendly mining framework. ➤ Develop and Roll out a country wide Mineral Tenement Registry. ➤ Develop and Roll out Internet based country wide Mineral Concession approval system. ➤ Develop and Roll out Internet based pitmouth to port or plant (end-to-end) ore accounting and royalty system. 	<p>New Legislation envisages creation of independent regulatory and enforcement system. The details will be evolved in subordinate legislation.</p> <p>The DPR of Mining Tenement system is under preparation for the registry component. The spatial part of the MTS will be taken up subsequently.</p> <p>Internet based reporting system is under development. IBM's computerized system being upgraded.</p> <p>Online reports from the mine owners are going to be introduced; Rules amended for the purpose (Rule 45 of MCDR)</p>
3.	<p>Promote Scientific and Optimal Mining</p> <ul style="list-style-type: none"> ➤ Incentivise private sector to create R&D institutions to advise on and projectise beneficiation and value addition particularly at ore stage (allow carry forward of expenditure on R&D into mining phase). ➤ Facilitate creation of a free market for ore, in order to ensure better utilization of the entire run-of-the-mine. 	<p>No action so far.</p> <p>New legislation will promote this.</p>

4.	<p>Infrastructure Creation</p> <ul style="list-style-type: none"> ➤ Provide enabling environment and create capability for planning large scale mining projects at suitable locations, with concomittant infrastructure creation (mega-mining projects) and social and environmental management programmes at best-practice standards. ➤ Ensure funding of critical road, rail and port infrastructure (List at Annexure 'A'). ➤ Provide a mechanism in the Legislation to ensure that significant proportion of mining revenues are ploughed back into mining area for local socio-economic infrastructure creation, management and maintenance. 	<p>New mechanism need to be created having all stakeholders.</p> <p>Taken up with Planning Commission for funding and PPP models for execution under CCI process.</p> <p>Suitable provisions in new MMDR Act are incorporated.</p>
5.	<p>Modernise Exploration and the Mining Industry</p> <ul style="list-style-type: none"> ➤ Incentivise manufacture and use of modern mining equipment and machinery (eg. Full write-off of capex on advanced mining equipments and technologies, special import benefits). ➤ Tax/fiscal burden on mining as a whole needs to be holistically reviewed for deciding on the royalty. Mineral-specific and site-specific consideration also need to be taken into account. ➤ International collaboration in Areas of high tech. infusion. 	<p>Nothing specific so far. CII and FIMI are being supported in holding of mining equipment and exponents as first step.</p> <p>Preparation for next royalty review in the year 2012 started.</p> <p>MoUs with countries having advanced technology in geoscience, R&D and mineral exploration for deep seated mineral deposits are being entered</p>

	<ul style="list-style-type: none"> ➤ Upgrade GSI's Training Institute in order to train geoscientists of Central and State Governments and private sector and of other countries under bilateral MoUs. ➤ Augmentation of S&T personnel ➤ Take forward the Skill Mapping Study (done with CII support) to ensure that University curriculum adequately caters to knowledge required for modern methods of exploration and mining and facilities are created for skill upgradation at mine level. ➤ Create and utilize forums such as Professional Congresses and Expositions to showcase industry and highlight technical issues. 	<p>into. GSI Training Institute is now functioning in Mission Mode. Proposals for strengthening Regional Training Centres and Field Training Centres need providing modern infrastructure and state of the art instruments have been planned.</p> <p>Detailed action plan will be submitted for Govt. approval.</p> <p>The matter is being taken up with HRD Ministry and ISMU for developing suitable curriculum for the mining sector for skill upgradation.</p> <p>Geoscience Congress being constituted. Scheme for support of S&T initiative developed for ramp up during 12th Plan.</p>
6.	<p>Increase Mineral Resources and help ensure raw materials security</p> <ul style="list-style-type: none"> ➤ Reclassify existing exploration in accordance with UNFC. ➤ Ensure that all held areas are fully explored and resources classified as per UNFC. ➤ Create systems to integrate concessional data with official 	<p>GSI has been asked to dedicate resources for the purpose.</p> <p>Instructions issued under Rule 27(3) Rule 14 of MCR to concession holders.</p> <p>Part of GSI's portal III Project and IBM's</p>

	<p>data to continuously update resource position.</p> <ul style="list-style-type: none"> ➤ Computerise Resource and Reserve databases in web enabled format to allow for online updation. ➤ Intensify efforts to access supplies of the following minerals (Base metals, fertilizer minerals, rare earths, strategic metals including cobalt, molybdenum, nickel etc.) in which India is currently in deficit in relation to known resources. ➤ More thrust to be given on recycling (Cu, Pb, Zn, Al, waste materials use in cement) by policy changes in import duty structure. 	<p>computerization project are envisaged. States need to be encouraged for similar efforts for non-First Schedule minerals.</p> <p>National Inventory and online reporting are under development as part of IBM's computerization.</p> <p>Intensify G2G and B2B relationships with mineral rich countries particularly Canada, Australia, African countries, North Asian countries etc.</p> <p>Detailed Techno-economic studies are being taken up.</p>
7.	<p>Implement Sustainable Development Framework</p> <ul style="list-style-type: none"> ➤ Create capability in IBM and IBM Regional Offices for policy, strategy and monitoring. ➤ Create capability in DGMs for strategy, planning and monitoring. 	<p>The IBM will be geared up to take this responsibility as per the requirement of SDF framework through the HPC Report on IBM currently under finalization..</p> <p>State Governments have been asked to prepare Action Plans. The new draft Act enables States Cess and District Mineral Fund to be used for</p>

	<ul style="list-style-type: none"> ➤ Create capability at District Level for local planning and implementational monitoring. 	these purposes.
8.	<p>Provide direction to Science Policy and R&D</p> <ul style="list-style-type: none"> ➤ Create conditions for growth of a mineral process R&D industry on a commercially self-sustaining basis. ➤ Create network of Government R&D institutions and set up R&D facilities to cover gaps in R&D in use of metals and alloys, including next generation metals, energy related metals and electronic metals, as well as recycling of such metals. ➤ Create Centre for Excellence in Fundamental and Multidisciplinary Geoscience in GSI. 	<p>Mechanism yet to be created.</p> <p>Mechanism yet to be created for net working of Govt. R&D Institutions. However, MoM sponsored S&T Projects and NFTDC under the Ministry are engaged in R&D activities and use of metals and alloys, etc.</p> <p>The proposal taken up in Modernisation Report of GSI and will take shape in XIIth Plan.</p>
9.	<p>Enable Techno-economic Policy Formulation</p> <ul style="list-style-type: none"> ➤ Create institution for science policy direction. ➤ Ensure creation and strengthening of appropriate techno-economic policy institution to address strategic issues. 	<p>Develop C-TEMPO (a registered society, under the aegis of Ministry) for evolving policy options. Strengthen and collaborate with other techno-economic institutions such as TERI, TIFAC, C-STEP, etc.</p>